US005123467A

United States Patent [19]

Steinberg

[11] **Patent Number: 5,123,467**

[45] **Date of Patent: Jun. 23, 1992**

[54] **DIAPERBAG**

[75] Inventor: **David J. Steinberg**, Brooklyn, N.Y.

[73] Assignee: **Romar International Corp.**, New York, N.Y.

[21] Appl. No.: **803,045**

[22] Filed: **Dec. 6, 1991**

[51] **Int. Cl.**[5] **A45C 15/00**
[52] **U.S. Cl.** **150/106**; 150/114
[58] **Field of Search** 150/100, 106, 114; 446/397; 40/455, 906

[56] **References Cited**

U.S. PATENT DOCUMENTS

2,218,396	10/1940	Hallbauer	150/106
2,513,013	6/1950	Feldman	150/106
3,045,900	7/1962	Zekendorf	150/106
3,144,065	8/1964	Burgio, Jr.	150/106
3,798,806	3/1974	Sanford	40/455
4,050,493	9/1977	Cho	150/106
4,607,747	8/1986	Steiner	40/455
4,960,233	10/1990	Morchower	150/106
5,063,698	11/1991	Johnson et al.	40/455

FOREIGN PATENT DOCUMENTS

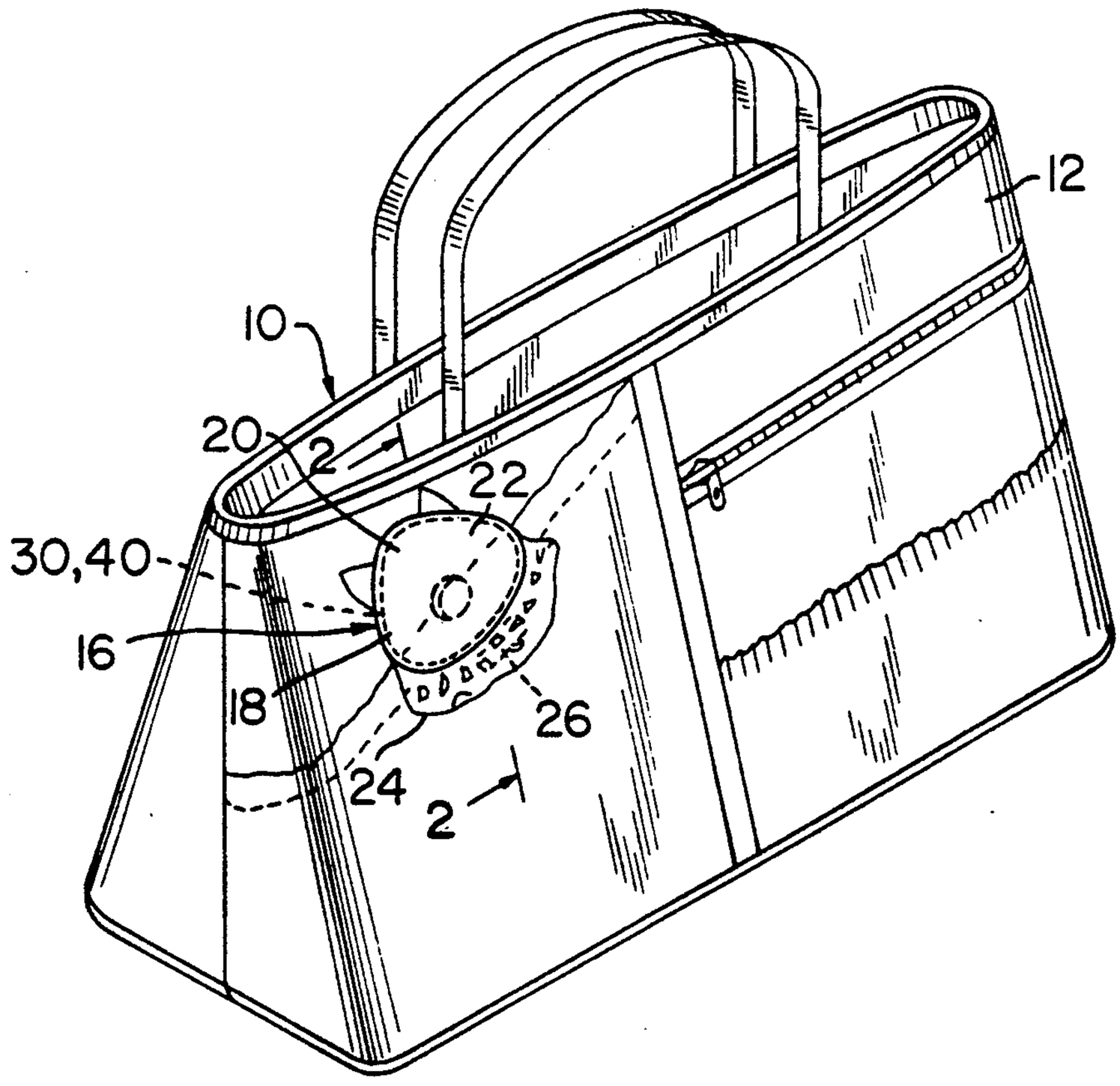
1356204	2/1964	France	150/100
2613863	10/1988	France	40/906

Primary Examiner—Gary E. Elkins
Attorney, Agent, or Firm—Amster, Rothstein & Ebenstein

[57] **ABSTRACT**

A diaperbag includes a utility bag for storage and transport of baby paraphernalia, the utility bag defining at least one compartment configured and dimensioned to receive baby paraphernalia therein. An actuatable electronic sound chip for generating sound is secured to the bag. A switch is provided for actuating the chip, the switch being permanently secured to the bag and in operative communication with the chip. In a preferred embodiment, the bag includes a closure for the compartment, the closure being manually movable between an opening orientation enabling free access to the compartment and a closing orientation limiting free access to the compartment. The switch and closure are constructed, configured and dimensioned such that manual movement of the closure from the closing orientation to the opening orientation is normally sufficient to cause the switch to actuate the chip.

7 Claims, 1 Drawing Sheet



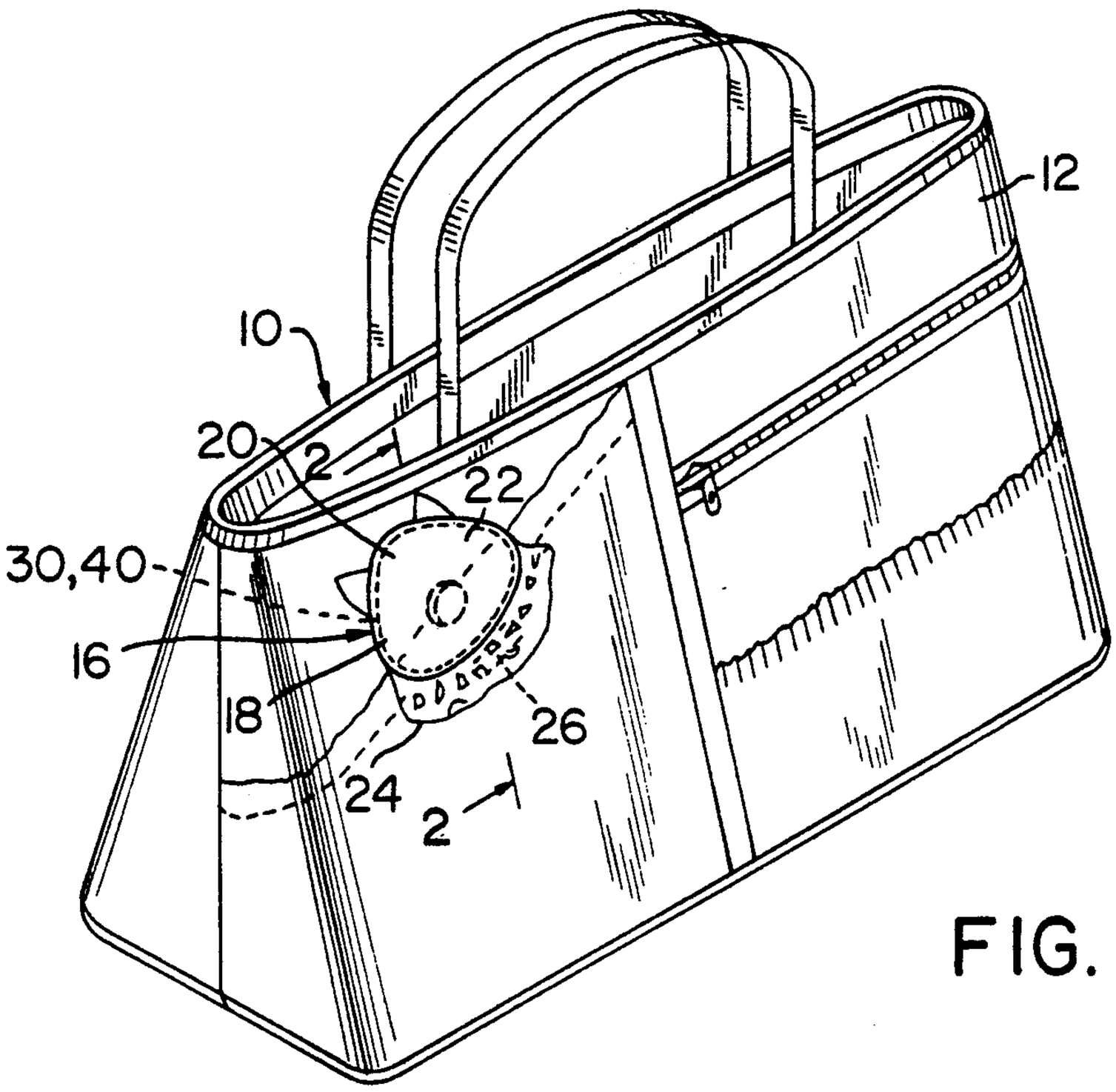


FIG. 1

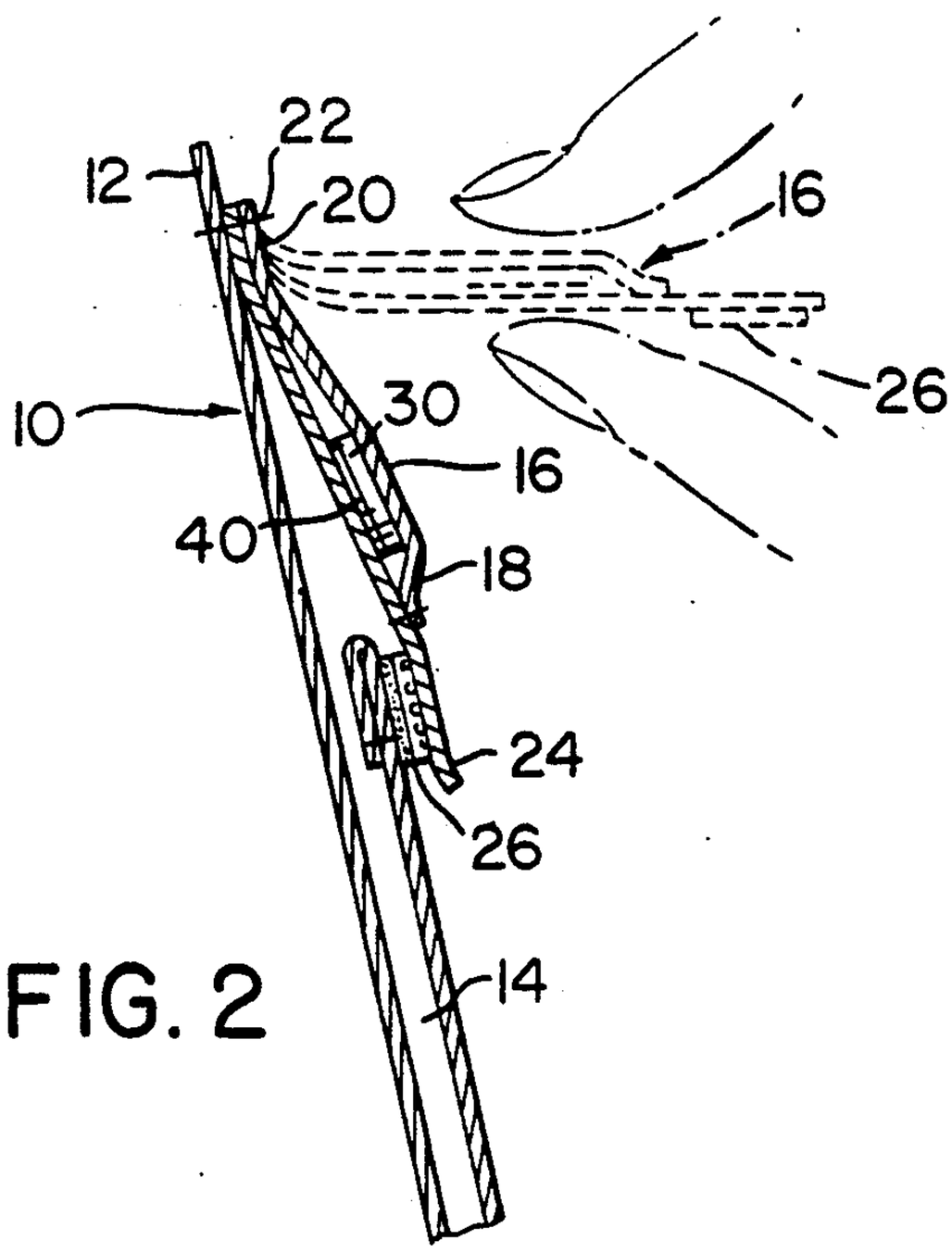


FIG. 2

DIAPERBAG

BACKGROUND

The present invention relates to a diaperbag and more particularly to a diaperbag which can generates sound.

The diaperbag is a utility bag intended for the storage and transport of baby paraphernalia, including typically such items as diapers, baby powder, baby oil, feeding bottles, blankets, and the like Typically the bag includes a plurality of compartments configured and dimensioned to receive baby paraphernalia therein Some of the compartments are typically permanently open (that is, accessible) so as to facilitate use thereof, while others are typically closable by means of zippers, snap locks, microhook/microloop fasteners (of the type sold under the tradename VELCRO), and the like.

As a baby is usually in distress immediately prior to a diaper change, and the process of changing the diaper may itself be sufficient to put the changer in a condition of stress, it would be desirable for soothing sounds such as music (or even intra-uterine sounds similar to those heard by the child in the womb) to be played during use of the diaperbag. In particular instances a sound-generating system (e.g., a radio, tape, stereo or CD system) may not be readily available at the time and location of the diaper change. Thus there exists a need for a diaperbag which includes a sound-generating system so that the same is readily available for use with the diaperbag.

Preferably the soothing sounds would start about when a diaper is removed from a compartment of the diaperbag for a diaper-change. However, despite the beneficial effects of such sounds on both the baby and the changer, during the rush of preparing to change the diaper, the changer may neglect to actuate the sound-generating system. Although the sound-generating system is available and readily adjacent the diaperbag (for example, disposed in or on the diaperbag), the changer may simply forget to actuate the sound-generating system, being more concerned at the instant with pacifying the crying baby and preventing undue contamination of the area by the baby's exudate.

Accordingly, it is an object of the present invention to provide a diaperbag having as a part thereof actuatable electronic means for generating sound.

Another object is to provide such a diaperbag including switch means for actuating the sound-generating means, the switch means in a preferred embodiment being so constructed, configured and dimensioned that accessing of a predetermined compartment of the diaperbag is normally sufficient to actuate the sound-generating means.

A further object is to provide such a diaperbag in which, depending upon the desired application, closure of the compartment either is or is not normally sufficient to cause the switch means to again actuate the sound-generating means.

SUMMARY OF THE INVENTION

It has now been found that the above and related objects of the present invention are obtained in a diaperbag comprising utility bag means for storage and transport of baby paraphernalia, actuatable electronic means for generating sound, and switch means for actuating the sound-generating means. The sound-generating means is secured to the bag means, and the switch means is secured to the bag means and in operative communication with the sound-generating means.

In a preferred embodiment, the bag means defines at least one compartment configured and dimensioned to receive baby paraphernalia therein and closure means for the compartment. The closure means is manually movable between an opening orientation enabling free access to the interior of the compartment and a closing orientation limiting free access to the interior of the compartment. The closure means and the switch means are constructed, configured and dimensioned such that manual movement of the switch means from the closing orientation to the opening orientation is normally sufficient to cause the switch means to actuate the sound-generating means.

Preferably the switch means and the sound-generating means are secured together for movement as a unit, and optimally both are disposed on the closure means for movement as a unit therewith.

Depending on the intended application, the closure means and the switch means are constructed, configured and dimensioned such that manual movement of the switch means from the opening orientation to the closing orientation is or is not normally sufficient to cause the switch means to actuate the sound-generating means.

BRIEF DESCRIPTION OF THE DRAWING

The above and related objects, features and advantages of the present invention will be more fully understood by reference to the following detailed description of the presently preferred, albeit illustrative, embodiments of the present invention when taken in conjunction with the accompanying drawing:

FIG. **1** is an isometric view of a diaperbag according to the present invention, with a flap precluding access to the interior of a compartment thereof; and

FIG. **2** is a fragmentary sectional view taken along the line **2**—**2** of FIG. **1**, with the flap being illustrated in phantom line as being raised by fingers to enable access to the interior of the compartment.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring now to FIG. **1**, therein illustrated is a diaperbag according to the present invention, generally designated by the reference numeral **10**. The diaperbag **10** comprises a standard utility bag **12** of the type conventionally used for the storage and transport of baby paraphernalia (not shown), the bag **12** defining at least one compartment **14** configured and dimensioned to receive baby paraphernalia therein such as diapers, feeding bottles, baby powder, baby oil, and the like. The compartment **14** may be the main compartment of the bag **12**, but is illustrated in FIG. **1** as being a secondary smaller compartment disposed on an exterior surface of the bag **12**. The bag **12**, and in particular compartment **14**, may be formed substantially of any of the materials conventionally used for such bags, including plastic, textiles, combinations thereof, and the like.

The compartment **14** is provided with a closure generally designated **16**. The closure **16** is movable between a first or opening orientation enabling free access to the interior of the compartment **14** (see the phantom line illustration of FIG. **2**) and a second or closing orientation limiting free access to the interior of the compartment **14** (see FIG. **1** and the solid line illustration of FIG. **2**). The closure **16** is typically a flap **18** (as illus-

trated) which covers an open edge (e.g., the top) of the compartment **14**, but may alternatively be a zipper, button, or a like releasable closure. It is not necessary that the closure **16** effects a complete closure of the compartment **14**, but merely that the closure **16** limits free access thereto and would normally be moved from the closing orientation to the opening orientation by one wishing to access the interior of the compartment.

As illustrated, one edge **20** of the flap **18** is permanently secured to the outer surface of the bag **12** adjacent compartment **14** (e.g., by a sewn seam **22**, as illustrated) in such a manner that a portion of the flap **18** normally extending over the opening of compartment **14** can be raised away from the outer surface of the compartment **14** or otherwise moved away from the compartment **14** (for example, if the connection is by a pivot pin, by pivoting the flap **18** so as to permit free access to the interior of the compartment **14**). Another edge **24** of the flap **18** (typically an edge opposite edge **20**) is releasably secured to the outer surface of the compartment **14** by a releasable fastener **26** (such as a snap fastener, a microhook/microloop assembly of the type sold under the tradename VELCRO (as illustrated), or the like) so as to enable easy manual separation of the flap edge **24** from the outer surface of the compartment **14**, thereby enabling free access to the interior of the compartment **14** through the opening. It will be readily appreciated by those skilled in the art that, alternatively, the flap **18** could be permanently secured to the outer surface of the compartment **14** and releasably secured to the outer surface of the bag **12** with the same result that, depending upon the status of the releasable fastener **26**, free access to the interior of the compartment **14** is either enabled or limited. Further, while the compartment **14** is illustrated as having an open top which is releasably closable by the closure **16**, clearly the compartment **14** may have a side opening rather than a top opening, with the closure **16** then releasably closing the side opening.

Actuatable electronic means **30** for generating sound is secured to the bag **12**. The sound-generating means **30** is typically a conventional sound-generating chip of the type well known in the electronic arts and used in a variety of toys, appliances and the like. Depending upon the nature of the sound-generating means **30**, it may simply replay (albeit possibly in modified sequence) prerecorded sounds or it may actually generate sounds (which would not be prerecorded). Typically the sound-generating means **30**, once actuated, continues to generate the sound for a predetermined period of time or until the playing of a particular piece (e.g., a song) is completed. As will be appreciated by those skilled in the art, the sound-generating means **30** may be used to generate music (for this application, preferably soothing music or a lullaby), voice, or the like. Indeed, if desired, the chip **30** may be used to generate a soothing intra-uterine sound resembling the sounds heard by a baby in the womb.

Switch means **40** are provided for actuating the sound-generating means **30**, the switch **40** being permanently secured to the bag **12** and in operative communication with the sound-generating means **30**. According to a preferred embodiment of the present invention, it is critical that the switch **40** is constructed, configured and dimensioned such that manual movement of a predetermined closure **16** (i.e., flap **18**) from the closing orientation to the opening orientation is normally sufficient to cause the switch **40** to actuate the sound-generating means **30**. In the preferred embodiment illustrated, the sound-generating means **30** and the switch **40** are secured together for movement as a unit, both being disposed on and actually within the flap **18** for movement as a unit therewith. Thus the switch **40** may simply be of the pressure-actuated type well known in the switch art, such that grasping of the closure **16** in order to move it from its closing orientation to its opening orientation will normally cause sufficient pressure to be applied to the switch that it, in turn, actuates the sound-generating means **30**. The flap **18** may bear on its outer surface either an express legend in words indicating the presence of the switch **40** ("SWITCH") or the method of operating the same ("PRESS HERE!"), or the same effect may be obtained through the use of graphics without words.

In order to ensure that the grasping of the closure means **16** is normally sufficient to actuate the switch **40**, the closure means **16** and the switch **40** must be constructed, configured and dimensioned to that end—in other words, so that the user normally places his or her fingers in the correct position to contact and activate the switch **40** as part of the flap-lifting process. For example, the portion of the flap **18** which is normally grasped by the user may be of such small area or so located that the user invariably contacts the pressure-sensitive surface of the switch **40**. Where the closure means **16** is not a flap **18**, but a zipper or the like, the sound-generating means and switch may be disposed elsewhere on the bag **12**, but with the switch **40** responsive to the position of the zipper locking element, such that, when the zipper is closed (i.e., the locking element is against one end of the zipper), the switch is deactivated, and, when the zipper is open (i.e., the locking element is spaced from that one end), the switch is activated. In such a case, the locking element of the zipper may itself be a part of the switch.

In either instance, it will be appreciated that the switch **40** may be activated, thereby actuating the sound-generating means **30**, without permitting free access to the interior of the compartment **14**. In the case of a flap **18**, the flap **18** may simply be squeezed at an appropriate point, without being moved from its closing orientation to its opening orientation, this being sufficient to activate the switch **40**. In the case of a zipper, the locking element may be moved only a slight distance away from the one end, a distance sufficient to activate the switch without permitting free access to the interior of the compartment.

When the diaperbag **10** of the present invention is used, the very act of opening the closure **16** so as to access the compartment **14** (as illustrated in phantom line in FIG. **2**) will normally be sufficient to activate switch **40**, and hence actuate the sound-generating means **30**, so that the person using the diaperbag does not have to especially remember to turn on the soothing music or take any special action with respect thereto beyond the normal accessing of the compartment. After the baby is changed and the baby paraphernalia is returned to the diaperbag **10**, normally the compartment will be closed by the user so that the next time the user accesses the compartment he or she will again activate the switch **30**, and hence the sound-generating means **40**.

If desired, the closure **16** can be designed such that its movement from the opening orientation to the closing orientation will not normally activate the switch **40** to actuate the sound-generating means **30** since at this

point the baby has already been changed and there is no need for soothing music to be produced. This can be easily effectuated by placing the switch **40** in a position where it is contacted and pressure is applied thereto when the flap **18** is being raised (moved to the opening orientation), but not when the flap is being lowered (moved to the closing orientation). Alternatively, as illustrated in FIG. **2**, the switch **40** may be sensitive to pressure applied to only one surface thereof, that surface being the undersurface of the flap **18** which has pressure applied thereto primarily when the flap is being raised, and not the oversurface of the flap **18** which has pressure applied thereto primarily when the flap is being lowered. However, if desired, the closure means **16** can be designed such that movement thereof from the opening orientation to the closing orientation will normally activate the switch means **40** to actuate the sound-generated means **30**—e.g., by utilization of a switch means **40** which is sensitive to pressure applied to either side of flap **18** (both the undersurface and oversurface thereof).

It will be appreciated that, while the normal opening of the compartment (that is, moving the flap **18** to the opening orientation) will be sufficient to actuate the switch **40**, and hence actuate the sound-generating means **30**, the switch **40** may also be actuated without moving the flap **18** from one orientation to another. For example, the user may simply grasp the flap **18** in such a manner that a suitable level of pressure is applied to the appropriate surface to activate the switch **40**, and hence actuate the sound-generating means **30**. In this instance, of course, it is not essential that the switch **40** and sound-generating means **30** be disposed on the flap **18** (or other closure **16**), and they may simply be disposed on a conveniently accessible portion of bag **12** for the user to activate when and if he/she feels appropriate. Of course, in this instance the automatic turn-on feature of the diaperbag **10** is lost, and the user must remember to make the necessary effort to activate the switch **40** and hence actuate the sound-generating means **30**. Nonetheless, in particular applications such an embodiment may be preferred as the user retains more complete control over if and when the sound-generating system is to be actuated.

In particular applications, if desired, the sound-generating means **30**, once actuated by activation of switch **40**, may continue to play only so long as the switch **40** is continuously activated (e.g., pressed) and may automatically shut itself off once the switch **40** is deactivated (e.g., pressure on the switch released), thereby affording the user a greater degree of control over the duration of the sound. In such circumstances, because typically the user is not able to spare a finger to apply continued pressure to a pressure-actuated switch, it may be desirable to use a bipolar switch (which must be manually moved between a stable on/activated position and a stable off/deactivated position) or a special pressure switch which is activated by the first application of pressure thereto and deactivated by the second application of pressure thereto. Each of such switches is well known in the switching art and hence need not be set forth in further detail herein.

To summarize, the present invention provides a diaperbag having as a part thereof actuatable electronic means for generating sound. The diaperbag includes switch means for actuating the sound-generating means, the switch means preferably being so constructed, configured and dimensioned that accessing of a particular compartment of the diaperbag is normally sufficient to actuate the sound-generating means. Depending upon the desired application, closure of the compartment either is or is not normally sufficient to cause the switch means to again actuate the sound-generating means.

Now that the preferred embodiments of the present invention have been shown and described in detail, various modifications and improvements thereon will become readily apparent to those skilled in the art. Accordingly, the spirit and scope of the present invention are to be construed broadly and limited only by the appended claims, and not by the foregoing disclosure.

I claim:

1. A diaperbag comprising:

(A) utility bag means for storage and transport of baby paraphernalia;

(B) actuatable electronic means for generating sound, said sound-generating means being secured to said bag means; and

(C) switch means for actuating said sound-generating means, said switch means being secured to said bag means and in operative communication with said sound-generating means.

2. The diaperbag of claim **1** wherein said bag means defines at least one compartment configured and dimensioned to receive baby paraphernalia therein and closure means for said compartment, said closure means being manually movable between an opening orientation enabling free access to the interior of said compartment and a closing orientation limiting free access to the interior of said compartment, said closure means and said switch means being constructed, configured and dimensioned such that manual movement of said switch means from said closing orientation to said opening orientation is normally sufficient to cause said switch means to actuate said sound-generating means.

3. The diaperbag of claim **2** wherein said closure means and said switch means are constructed, configured and dimensioned such that manual movement of said switch means from said opening orientation to said closing orientation is normally sufficient to cause said switch means to actuate said sound-generating means.

4. The diaperbag of claim **2** wherein said closure means and said switch means are constructed, configured and dimensioned such that manual movement of said switch means from said opening orientation to said closing orientation is normally not sufficient to cause said switch means to actuate said sound-generating means.

5. The diaperbag of claim **2** wherein said switch means and sound-generating means are both disposed on said closure means for movement as a unit therewith.

6. The diaperbag of claim **1** wherein said switch means and said sound-generating means are secured together for movement as a unit.

7. A diaperbag comprising:

(A) utility bag means for storage and transport of baby paraphernalia, said bag means defining at least one compartment configured and dimensioned to receive baby paraphernalia therein and closure means for said compartment, said closure means being manually movable between an opening orientation enabling free access to the interior of said compartment and a closing orientation limiting free access to the interior of said compartment;

(B) actuatable electronic means for generating sound, said sound-generating means being secured to said bag means; and

(C) switch means for actuating said sound-generating means, said switch means being secured to said bag means and in operative communication with said sound-generating means;

said closure means and said switch means being constructed, configured and dimensioned such that manual movement of said switch means from said closing orientation to said opening orientation is normally sufficient to cause said switch means to actuate said sound-generating means; said switch means and sound-generating means both being disposed on said closure means for movement as a unit therewith.

* * * * *